



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,576	11/14/2003	Klaus Goller	2002 P 14328 US	1787
25962	7590	08/06/2004	EXAMINER	
SLATER & MATSIL, L.L.P. 17950 PRESTON RD, SUITE 1000 DALLAS, TX 75252-5793			GILMAN, ALEXANDER	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/714,576	GOLLER ET AL.	
	Examiner	Art Unit	
	Alexander D Gilman	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-20 is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/27/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2833

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Chiu et al.

With regard to claim 1, Chiu et la (US 6,600,227) disclose (Fig. 3) a test structure comprising:

a first interconnect line (345)

a second interconnect line (340) arranged above the first interconnect line',

a via (Fig. 6, no reference number) electrically coupling the first interconnect line to the second interconnect line;

a plurality of additional conductive structures (Fig. 6, r.n. 350) arranged in a closely adjacent manner around the via, the additional structures lying in the same plane as one of the first interconnect line or the second interconnect line.

With regard to claims 2, 3, Chiu et la disclose that the additional structures comprise dummy structures without or with circuitry function (col. 5, line 20).

With regard to claims 4, 5, Chiu et la disclose that the additional structures (350) comprise dummy interconnects. arranged around the via.

With regard to claim 6, Chiu et la disclose (Fig. 6) that the dummy interconnects (350) essentially surround the via in an equidistant manner.

With regard to claims 7, 8, Chiu et la disclose that the first and second interconnects and the additional structures are comprised of metal (col. 5, lines 16-19).

Art Unit: 2833

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al in view of Yeh et al.

Chiu et al disclose all of the limitations except for explicitly disclosing that the first and second interconnects and the additional structures are comprised of aluminum or copper

Yeh et al (US 6,413,847) disclose (col. 4, lines 10-13) the interconnects and the additional structures are comprised of aluminum or copper.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the interconnects and the additional structures manufactured from aluminum or copper, as taught by Yeh et al since that materials are well known in the art for the specified needs.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al in view of Kinugawa
Chiu et al disclose all of the limitations except for explicitly disclosing that the first and second interconnects and the additional structures are comprised of polysilicon

Kinugawa (US 5,929,528) disclose (col. 5, line 43) the interconnects and the additional structures are comprised of polysilicon.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the interconnects and the additional structures manufactured from aluminum or copper, as taught by Kinugawa since that material is well known in the art for the specified needs.

Allowable Subject Matter

Claims 12-20 are allowed.

Art Unit: 2833

No prior art has been found to anticipate or render obvious the presently claimed subject matter.

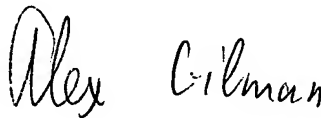
Specifically, none of the prior art of record discloses the combination of the limitations presented including the specified disposition of the first conductive line, the second and third conductive lines regarding the via (claim 12)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

08/03/2004

Handwritten signature of Alex Gilman in cursive script.

ALEXANDER GILMAN
PRIMARY EXAMINER